



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE JOURNAL OF THE ARCHAEOLOGICAL
INSTITUTE OF AMERICA

Archaeological Institute of America

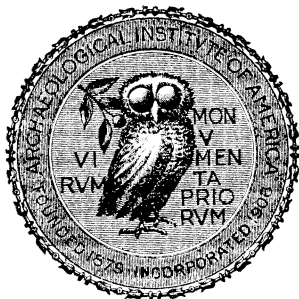
AMERICAN
JOURNAL OF ARCHAEOLOGY

Second Series

THE JOURNAL OF THE ARCHAEOLOGICAL
INSTITUTE OF AMERICA

VOLUME XX

1916



CONCORD, N. H.

PUBLISHED FOR THE INSTITUTE BY

The Rumford Press

NEW YORK: THE MACMILLAN COMPANY

LONDON: MACMILLAN & CO., LTD.

American Journal of Archaeology

SECOND SERIES

THE JOURNAL OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

Vol. XX, 1916

Editorial Board

Editor-in-Chief

HAROLD NORTH FOWLER,
Professor in Western Reserve University

Associate Editors

GEORGE H. CHASE (*for the American School at Athens*),
Professor in Harvard University.

JAMES A. MONTGOMERY (*for the American School in
Palestine*),

Professor in the Philadelphia Divinity School.

ALLAN MARQUAND (*for Mediaeval and Renaissance Archae-
ology*),

Professor in Princeton University.

FREDERICK H. STERNS (*for American Archaeology*),
Associate in Harvard University.

WILLIAM N. BATES,
Professor in the University of Pennsylvania.

Honorary Editors

F. W. SHIPLEY (*President of the Institute*),
Professor in Washington University.

JAMES R. WHEELER (*Chairman of the Managing Committee
of the School at Athens*),
Professor in Columbia University.

CHARLES C. TORREY (*Chairman of the Managing Committee
of the School in Jerusalem*),
Professor in Yale University.

Editorial Contributors

Professor CARROLL N. BROWN,
Classical Archaeology.

Miss MARY H. BUCKINGHAM,
Classical Archaeology.

Dr. THEODORE A. BUENGER,
Classical Archaeology.

Dr. LACEY D. CASKEY,
Classical Archaeology.

Professor HAROLD R. HASTINGS,
Classical Archaeology.

Professor ELMER T. MERRILL,
Numismatics.

Professor LEWIS B. PATON,
Oriental Archaeology.

Professor ARTHUR S. PEASE,
Classical Archaeology.

Professor SAMUEL BALL PLATNER,
Roman Archaeology.

Professor JOHN C. ROLFE,
Roman Archaeology.

Dr. JOHN SHAPLEY,
*Christian and Mediaeval
Archaeology.*

Professor ARTHUR L. WHEELER,
Numismatics.

CONTENTS

ARCHAEOLOGICAL INSTITUTE OF AMERICA:	PAGE
The Characteristics of Eye Beads from the Earliest Times to the Present (Plate I).—GUSTAVUS EISEN	1
Middle Italian Signets of Approximately 350 to 50 B.C. —DUFFIELD OSBORNE	28
Studies in the History and Topography of Locris I. —W. A. OLDFATHER	32
The Problem of Byzantine Neumes.—H. J. W. TILLYARD	62
A New Euphronios Cylix in the Metropolitan Museum of Art (Plates II-VI).—GISELA M. A. RICHTER	125
The Origin of Glass Blowing.—GUSTAVUS EISEN	134
Fragment of a Vase at Oxford and the Painter of the Tyszkiewicz Crater in Boston.—J. D. BEAZLEY	144
Studies in the History and Topography of Locris II. —W. A. OLDFATHER	154
Latin Inscriptions at the University of Pennsylvania. —JOHN C. ROLFE	173
Babylonian Origin of Hermes the Snake-God, and of the Caduceus. —A. L. FROTHINGHAM	175
Head of Helios from Rhodes (Plates VII-VIII). —THEODORE LESLIE SHEAR	283
Button Beads—with Special Reference to those of the Etruscan and Roman Periods (Plates IX-X).—GUSTAVUS EISEN	299
The Bryn Mawr Collection of Greek Vases (Plates XI-XIII). —MARY HAMILTON SWINDLER	308
Addenda on Larymna and Cyrtone.—W. A. OLDFATHER	346
A Greek Head of a Goddess in the Museum of Fine Arts, Boston (Plates XVI-XVIII).—L. D. CASKEY	383
A Reminiscence of a Satyr Play.—WILLIAM N. BATES	391
New Representations of Chariots on Attic Geometric Vases. —EUGEN VON MERCKLIN	397
A Note on the So-Called Horse-Shoe Architecture of Spain. —GEORGIANA GODDARD KING	407
Three Notes on Capitals.—GEORGIANA GODDARD KING	417
Preliminary Report on the Great Chalice of Antioch Containing the Earliest Portraits of Christ and the Apostles. —GUSTAVUS A. EISEN	426
A Note on Two Vases: <i>A.J.A.</i> XX, 1916, pages 132 and 312. —STEPHEN BLEECKER LUCE, JR.	438
AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS:	
A Marble Head from Corinth (Plates XIV-XV).—E. H. SWIFT . . .	350
The Origin of the Shape of the "Nolan" Amphora. —STEPHEN BLEECKER LUCE, JR.	439

ARCHAEOLOGICAL NEWS AND DISCUSSIONS (July, 1915-June, 1916).—

WILLIAM N. BATES, *Editor*

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS . . . 95, 357

Oriental and Classical Archaeology:—General and Miscellaneous, 95, 357; Egypt, 97, 359; Asia Minor, 100, 360; Greece, 100, 360; Italy, 103, 363; Spain, 108; France, 109, 365; Germany, 110, 365; Austria-Hungary, 111; Russia, 111; Great Britain, 112, 366; Northern Africa, 112, 368; United States, 112, 369.

Early Christian, Byzantine, Mediaeval and Renaissance Art:—Egypt, 114; Greece, 114; Italy, 114, 370; France, 117, 375; Holland, 117; Germany, 118, 375; Austria-Hungary, 118; Sweden, 376; Great Britain, 120, 376; United States, 120, 378.

American Archaeology:—General and Miscellaneous, 380.

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PERIODICALS, 213, 475

Oriental and Classical Archaeology:—General and Miscellaneous, 213, 475; Egypt, 216, 477; Babylonia, Assyria, and Persia, 217, 478; Syria and Palestine, 219, 480; Asia Minor, 221, 480; Greece, 222, 482 (Sculpture, 222, 482; Vases and Painting, 225, 486; Inscriptions, 227, 489; Coins, 229, 490; General and Miscellaneous, 229, 490); Italy, 232, 493 (Sculpture, 232, 493; Vases and Painting, 233, 494; Inscriptions, 233, 494; Coins, 234, 495; General and Miscellaneous, 235, 496); Spain, 238, 497; France, 238, 497; Switzerland, 238; Germany, 238, 498; Russia, 498; Great Britain, 239, 499; Northern Africa, 239, 500.

Early Christian, Byzantine, and Mediaeval Art:—General and Miscellaneous, 240, 501; Italy, 243, 502; Spain, 246; France, 503; Germany, 246; United States, 504.

Renaissance Art:—General and Miscellaneous, 504; Italy, 249, 505; Spain, 256; France, 257; Belgium and Holland, 257; Germany, 260; Great Britain, 262, 508; United States, 508.

American Archaeology:—General and Miscellaneous, 262, 509.

BIBLIOGRAPHY OF ARCHAEOLOGICAL BOOKS: 1915.

—WILLIAM N. BATES, *Editor* 267

General and Miscellaneous 267

Egyptian Archaeology 269

Oriental Archaeology 271

Classical Archaeology 272

Greek and Roman 272

Greek, 273 (I, General and Miscellaneous, 273; II, Architecture, 274; III, Sculpture, 274; IV, Vases, 274; V, Inscriptions, 274; VI, Coins, 275).

Roman, 275 (I, General and Miscellaneous, 275; II, Architecture, 276; III, Sculpture, 276; IV, Vases, 276; V, Inscriptions, 276).

Christian Art 277

(I, General and Miscellaneous, 277; II, Early Christian, Byzantine, and Mediaeval, 279; III, Renaissance, 280).

Abbreviations used in the News, Discussions, and Bibliography 123

PROCEEDINGS OF THE SEVENTEENTH GENERAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA, Princeton and Washington,	
December 29, 30, and 31, 1915	73
Preliminary Statement	73
Abstracts of Papers read:	
A Greek Head of a Goddess Recently Acquired by the Museum of Fine Arts, Boston.—L. D. CASKEY (See pp. 383-390)	73
Some Greek Vases in the Stanford Museum.	
—H. RUSHTON FAIRCLOUGH	73
A New Euphronios Cylix in the Metropolitan Museum of Art.	
—GISELA M. A. RICHTER (See pp. 125-133)	75
Head of Helios from Rhodes.—T. LESLIE SHEAR (See pp. 283-298)	75
Some Sculptures in Princeton.—ALLAN MARQUAND	75
The Bazzichelli Psykter of Euthymides.—JOSEPH CLARK HOPPIN	75
A Latin Inscription and Some other Antiquities in Southern Lebanon.—JAMES A. MONTGOMERY	75
The Significance of the Symbols on Babylonian Boundary Stones.	
—WILLIAM J. HINKE	76
Some Egypto-Roman Embroideries in the Royal Ontario Museum, Toronto.—W. SHERWOOD FOX	77
Some Latin Inscriptions from Corinth.—LINDLEY RICHARD DEAN	77
Recent Excavations at Corinth.—B. H. HILL	77
Sculptures from Recent Excavations at Corinth.—E. H. SWIFT	77
Prehistoric Sites at Corinth.—C. Q. BLEGEN	77
The Mediaeval Basilica of S. Croce in Gerusalemme in Rome.	
—PHILIP B. WHITEHEAD	77
The Arch of Aragon.—E. T. DEWALD	77
Serpotta, an Italian Sculptor of the Baroque Period.	
—GEORGE B. MCCLELLAN	78
A Youthful Portrait of Van Dyck in the Fogg Museum, Cambridge.—GEORGE H. EDGEELL	78
A Newly Acquired Sassetta Lent to the Fogg Art Museum, Cambridge.—PAUL J. SACHS	78
Four Covered Bowls from Orvieto.—EDITH HALL DOHAN	78
Influential Elements in Early Christian Art.—C. D. LAMBERTON	78
Plans of Some Pagan and Christian Buildings in Syria.	
—S. B. MURRAY, JR.	79
Origin of the So-called Mausoleum of Galla Placidia.	
—JOHN SHAPLEY	80
The Monuments of Antioch in the Byzantine Literature.	
—P. VAN DEN VEN	80
Treatment in Art of Alexander the Great's Celestial Journey.	
—ROGER S. LOOMIS	80
Unpublished Illustrations of Apuleius' Story of Cupid and Psyche.	
—E. H. HAIGHT	81
The Year of the Crucifixion.—R. W. HUSBAND	81
Personal Ornaments of the Ancient Egyptians.—G. C. PIER	81
The Egypt Exploration Fund: A Plain Statement of Present Needs.	
—W. N. STEARNS	82

GENERAL MEETING—(*Continued*):

A Note on the So-called Horse-Shoe Arch in Spain.	
—GEORGIANA G. KING (See pp. 407-416)	83
The Rise and Fall of Maya Civilization in the Light of the Monuments and the Native Records.—SYLVANUS G. MORLEY . . .	84
Recent Progress in the Study of Maya Art.—HERBERT J. SPINDEN	84
The Chilam Balam Books and the Possibility of their Translation.	
—ALFRED M. TOZZER	84
Climatic Influences on the Southern Maya Civilization.	
—ELLSWORTH HUNTINGTON	84
Recent Excavations in Northern Yucatan.—EDWARD H. THOMPSON	84
Excavations in the Department of Peten, Guatemala.	
—RAYMOND E. MERWIN	84
Archaeological Studies in Northwestern Honduras.	
—MARSHALL H. SAVILLE	84
The North Building of the Great Ball Court, Chichen Itza, Yucatan.	
—ADA C. BRETON	84
The Maya Zodiac of Santa Rita.—STANSBURY HAGAR	84
The Hotun as the Principal Chronological Unit of the Old Maya Empire.—SYLVANUS G. MORLEY	84
Découvertes des premières Sépultures Indiennes de Cuba.	
—LUIS MONTANÉ	84
Porto Rican Burial Caves.—ROBERT T. AITKEN	84
Incense Burners from a Cave near Orizaba.—H. NEWELL WARDLE	84
The Archaeology and Physical Anthropology of Tenerife.	
—E. A. HOOTON	84
On the Origin and Distribution of Agriculture in America.	
—H. G. SPAIDEN	84
PROCEEDINGS OF THE SPECIAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA, San Francisco and San Diego, August 2, 3, 4, 5, 11, and 12, 1915	85
Preliminary Statement	85
Abstracts of Papers read:	
The Architecture of the Panama-Pacific Exposition.	
—EUGEN NEUHAUS	85
A Problem in Virgilian Flora.—H. R. FAIRCLOUGH	85
A Proposed Restoration of the East Pediment of the Parthenon.	
—OLIVER M. WASHBURN	86
Life Forms in the Pottery of the Southwest.	
—MRS. HARRY L. WILSON	86
Spanish Colonial Architecture at the Panama-California Exposition.—CARLETON M. WINSLOW	86
Ancient Mexican Spindle-whorls.—MRS. ZELIA NUTTALL	86
Aspects of Neolithic Culture of the Santa Barbara Channel Islands, California.—HECTOR ALLIOT	87
Latest Work of the School of American Archaeology at Quiragua, Guatemala.—EDGAR L. HEWETT	87
The Imperial Cult in Spain during the First Century A.D.	
—J. J. VAN NOSTRAND	87

SPECIAL MEETING—(*Continued*):

The Professions of the Heracleian Tablet.—JEFFERSON ELMORE	87
The Unpublished Material in the Mayance and Southern Mexican Languages.—WILLIAM E. GATES	87
The Trilingual Glosses—Hittite, Assyrian, Sumerian. —GEORGE HEMPL	88
Ghiberti's Gate of Paradise in Florence.—GEORGE BRYCE	88
The Relation of Religion to Art in Antiquity and the Middle Ages. —OSVALD SIRÉN	88
Notes on the History of Mining Law.—J. MURRAY CLARK	89
Sanctity of First Born.—MARTIN A. MEYER	89
The Jewish Sabbath in the Light of Babylonian Archaeology. —WILLIAM F. BADÉ	90
A New Argument for Locating Capernaum at Khan Minyeh. —EDWARD A. WICHER	90
Archaeology versus Estheticism in Dramatic Criticism. —ROY C. FLICKINGER	91
Archaeology at the Panama-California Exposition. —EDGAR L. HEWETT	91
Light on the Earliest History of Mediterranean Civilization. —GEORGE HEMPL	91
Archaeology at the Panama-California Exposition. —EDGAR L. HEWETT	92
Culture Destruction among the Mohave. —JOHN PEABODY HARRINGTON	92
H. P. Blavatsky and Archaeology.—WILLIAM E. GATES	92
Roman Portrait Sculpture.—F. W. SHIPLEY	92
Minoan Seals.—GEORGE HEMPL	93

PLATES

- I. Eye Beads.
- II. Cylix in the Metropolitan Museum; Interior.
- III. Cylix in the Metropolitan Museum; Exterior, Side A.
- IV. Cylix in the Metropolitan Museum; Exterior, Side A.
- V. Cylix in the Metropolitan Museum; Exterior, Side B.
- VI. Cylix in the Metropolitan Museum; Exterior, Side B.
- VII. Head of Helios from Rhodes.
- VIII. Head of Helios from Rhodes.
- IX. Button Beads; Fifth Century B.C. to Fourth Century A.D.
- X. Button Beads; Third Century B.C. to Fourth Century A.D.
- XI. Cyrenaic Cylix in Bryn Mawr.
- XII. Hydria in Bryn Mawr.
- XIII. Interior of Cylix at Bryn Mawr.
- XIV. Marble Head from Corinth.
- XV. Marble Head from Corinth.
- XVI. Marble Head of a Goddess.
- XVII. Marble Head of a Goddess.
- XVIII. Marble Head of a Goddess.
- XIX. Silver Chalice from Antioch.

ILLUSTRATIONS IN TEXT

	PAGE
Bead with Inlaid Coil	5
Bead with Stratified Eyes	5
Bead Made with Cut Off Rods	6
View of Rod	6
Stratified Eye Beads	13
Stratified Eye Beads	14
Stratified Eye Beads	17
Types of Eye Beads	18
Middle Italian Signets	29
Larymna. Cyclopean Wall by the Inner Harbor	38
Larymna. Tower on the Northeast by the Outer Harbor	39
Ruts in the Road between Upper and Lower Larymna	42
Larymna. The Inner Harbor	44
Upper Larymna. View up the Revma Toward the Copaic Lake	56
Linear System of Byzantine Musical Notation	64
Tomb of Prince Hepzefa	98
Tylissus; Plan of the Excavations	102
Tylissus; House Walls and Pithoi	103
Relief from Lecce	104
Terra-cotta Relief in New York	113
St. Catharine, St. Barbara, St. Peter, and St. Paul; by Michael Pacher	119
Cylix Signed by Euphronios, Metropolitan Museum, New York	126
Fragment of a Pelice in Oxford	144
Calyx Crater in Boston, from the Tyszkiewicz Collection; Side A	145
Calyx Crater in Boston, from the Tyszkiewicz Collection; Side B	146
Stamnus in the British Museum; Side A	147
Stamnus in the British Museum; Side B	148
Detail of Stamnus in Petrograd	149
Detail of Stamnus in Petrograd :	150
Pelice in Copenhagen	151
Martino; the Site of Bumeliteia	155
The Solitary Spring	160
View from the Summit of Monachou (Palaiochori), looking West	162
Kolaka. The Spring of Pausanias	164
Mount Chlomos, from the East	169
Inscription in Philadelphia	173
Hermes, on a Jena Lecythus (Harrison, Themis, p. 295)	178
Ward (Seal Cylinders of Western Asia), p. 408	180
Gudea's Libation Vase (= Ward, 368c)	181
Ward, 368a	183
Limestone Tablet of Gudea (= Ward, 368d)	184
Ward, 368b	185
Ward, p. 376	185
Ward, 368b	186
Ward, 823	188
Ward, 477; Ward, 424; Ward, 481; Ward, 335	193
Ward, 1305a; Ward, 237; Ward, 830; Ward, 1160	194

Ward, 428; Ward, 1278; Ward, 413	196
Ward, 337; Ward, 685; Ward, 763	197
Ward, 464; Ward, 705; Ward, 446	198
Ward, 436; Ward, 696; Ward, 692	199
Signet Ring from the Akropolis, Mycenae	200
Ward, 212; Ward, 414; Ward, 417	201
Ward, 442; Ward, 210; Ward, 440	202
Ward, 615; Ward, 1027 <i>b</i> ; Ward, 1020	203
The Triad of Syrian Gods of Hierapolis (Coin of Third Century A.D.)	208
The Origin of Life: Phoenician Tablet at Madrid	210
Minoan Bronze Statuette	222
Satyr and Dionysus; Fragmentary Group	224
The Chigi Vase	226
Silver Lanx from the Tyne	239
Viking Ship from Oseberg	242
Door of Tirol Castle	243
Saint; Naumburg	248
Two Saints; Naumburg	249
Dürer's Adam and Eve; Orpheus and Eurydice by the younger Vischer	261
Head of Helios from Rhodes	284
Head of Helios from Rhodes; Back	293
Head of Helios from Rhodes; Profile	297
Amphora in Bryn Mawr	313
Amphora in New York	314
Amphora in New York; Detail	315
Cyathus signed by Nikosthenes	316
Fragments of Cabeiric Pottery	317
Fragments of an Amphora	318
Fragment by the Master of the Phineus Cylix	319
Fragment in the Style of Sakonides	320
Cylix from the Workshop of Euergides	322
Cylix with Name Epeleios; Interior	323
Cylix with Name Epeleios (after Gsell)	324
Cylix with Name Epeleios (after Gsell)	324
Cylix in the Style of Duris; Interior	331
Fragment in the Style of Duris	332
Fragment of Amphora by the Master of the Berlin Amphora	334
Fragments of a Cylix by the "Meister von Capua"	335
Fragment of a Cylix	336
Fragment of an Amphora	337
Fragment of a Pinax	338
Fragments of Red Figured Vases	340
Fragments of Red Figured Vases	343
Medinet Habu; Stone Dais	359
Medinet Habu; Window	359
Head of Goddess; Greek, Fourth Century; Berlin	366
Head of Goddess; Greek, Fourth Century; Boston	369
Roman Portrait; Metropolitan Museum	370
Bust of Athlete; Greek, Fourth Century; Metropolitan Museum	371
Statuette of St. Anthony; Padua	372

Statuette of St. Louis; Padua	373
The Colonna Raphael; Metropolitan Museum	379
Pietà from the Chateau de Biron; Metropolitan Museum	380
Marble Head of a Goddess; Back View	386
Outlines of Foreheads of Five Heads of the Fourth Century	387
Mirror in Philadelphia	391
Ornament at Base of Handle of Mirror	392
Deinos in Athens	394
Bronze Model of Chariot; Berlin	398
Terra-cotta Model of Chariot; British Museum	399
Incorrect Reconstruction of a Geometric Chariot	404
S. Salvador de Val-de-Dios	408
S. Miguel de Escalada	410
Santiago de Peñalva	411
S. Tomás de las Ollas	412
S. Juan del Duero, Soria	413
Orense; Cathedral; Detail of South Portal	414
Leon; Wall of Cloister	415
Orense; Cloister of S. Francisco	415
Santiago de Barbadejo; Western Door	418
Las Huelgas; Entrance to Chapel of S. James	419
Sahagun; S. Lorenzo; Holy Water Stoup	421
Capital in Cloister of S. Miguel de Escalada	422
Santiago de Peñalva; Column of Nave	423
Villafranca; Church of Santiago; Puerta del Perdon	424
The Great Chalice; Apostle, No. 2, St. Peter	430
The Great Chalice; Apostle, No. 3	431
The Great Chalice; Apostle, No. 4	433
The Great Chalice; Apostle, No. 12	435
Typical Panel Amphora	439
Outline of Typical Red-Bodied Amphora	439
Outline of Nolan Amphora	439
Black-Figured Panel Amphora in Philadelphia	440
Amphora in New York (GR532)	441
Amphora in Boston (97.205)	442
Amphora in the Louvre (F385)	444
Amphora in the Louvre (F386)	445
Amphora in Athens; Side A (Inv.14459)	451
Amphora in Athens; (Side B) (Inv. 14454)	452
Amphora in the British Museum, (B188)	453
Amphora in the British Museum, (B189)	454
Partial Section of Amphora, New York Class	455
Partial Section of Amphora, Athens Class	455
Vase of Singular Form in the Louvre	462
Scene Painted on a Bowl from Orvieto	487
Suggested Arrangement of the Paintings of Panaenus	488
Terra-cotta Figurine in Madrid	497
Mosaic Representing a Chariot Race	501
Ugolino da Siena; Madonna; San Casciano	503
Madonna by Domenico Rosselli; Urbino	506